

Appl. No. : 10/637,145
Filed : August 8, 2003

REMARKS

In the Office Action mailed February 9, 2005, the Examiner objected to the Abstract and further rejected Claims 1-4, 8 and 9 and 40 as being anticipated under 35 U.S.C. § 102 by the Black et al. reference (U.S. Patent No. 6,542,000). The Examiner did, however, indicate that the subject matter of Claims 5-7 and 10-13 would be allowable over the art of record and that Claims 27-39 are allowed. By this paper, the Applicant has amended the Abstract to correct the informality noted by the Examiner. Moreover, the Applicant believes that independent Claim 1 and 40 as originally filed distinguish the Black et al. reference and hereby request reconsideration of the above-captioned application in light of the remarks contained herein.

After carefully reviewing Black et al., the Applicant notes that Black et al. fails to disclose a power-down detector that detects when power to the memory is being lost and generates a preselected storage signal that has sufficient pulse width to change the magnetic state of the GMR storage cell when detecting that power to the memory device is being lost. As discussed in the specification as filed, the Applicant's device is directed toward a device which detects when power is being lost to a memory circuit such that data in the memory circuit can be written to a GMR storage device. Hence, the disclosed embodiment of the Applicant's invention includes circuitry that will detect when power is being lost such that a signal can be sent to the GMR storage device which will allow data from other memory components to be stored in the GMR device.

Moreover, Claim 1 as originally filed expressly recites a power down detector. Similarly, Claim 40 as originally filed also recites the act of detecting a power interrupt.

After reviewing the Black et al. reference and, in particular, after carefully reviewing Column 8, Lines 20-31, referenced by the Examiner as teaching the power-down detector, the Applicant believes that Black fails to disclose any such power-down detector which is actually detecting when power is being lost. Specifically, the latch circuit 10 is described as working as a Standard Random Access Memory when provided with power in Column 8, at about Line 21. By attaching the magnetic components R122 and R224 to the latch circuit, it would appear that the magnetic components are continuously programmed as the memory state of the Standard Random Access Memory changes. Thus, when power is lost and then regained, the magnetic devices R122 and R224 can then be used to reprogram the latch circuit.

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Consequently, the Applicant believes that Black discloses a device that is continuously reprogramming the magnetic memories R122 and R224 rather than something that will program data directly into the GMR device in response to a power-down detector that is detecting when power to the memory device is being lost. In fact, it would appear that there would no motivation whatsoever in the Black reference to teach such a power-down detector as it would appear that Black is continuously storing the logic state. For this reason, the Applicant believes that Claim 1 as originally filed is allowable over the Black et al. reference.

Moreover, with respect to independent Claim 40, the Applicant believes that independent Claim 40 as originally filed is also allowable over the Black reference for reasons similar to the reasons discussed above in connection with Figure 1. In particular, there is no teaching of either detecting a power interrupt or of developing a pulse signal having a sufficient pulse width to change the magnetic state of at least one GMR storage cell upon detecting a power interrupt. Again, the Applicant does not believe that the Black et al. reference is actually sensing when there is a power interrupt as it would appear that that Black et al. reference is storing memory state on the GMR devices every time the corresponding Standard Random Access Memory state changes.

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Summary

For the foregoing reasons, the Applicant believes that Claims 1 and 40 are allowable over the art of record. The Applicant further notes that Claims 27-39 have already been allowed by the Examiner and the Applicant believes that the remaining pending dependent claims define additional patentable subject matter and are also allowable due to their respective dependencies on Claims 1 and 40. Consequently, the Applicant believes that the above-captioned application is in condition for allowance and requests the prompt allowance of the same. Should there be any impediment to the prompt allowance of this application that could be resolved by a telephone conference, the Examiner is respectfully requested to call the undersigned at the number shown below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 7/7/05

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